

# At 75, would Popeye still be able to take on Bluto?

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If Popeye were to age naturally like the rest of us, he would need more than just big muscles to stay independent during his senior years. When it comes to muscles and aging, the important thing is quality, not quantity, as shown by the findings of a study by Mylène Aubertin-Leheudre, PhD, a researcher at the Research Centre of the Institut universitaire de gériatrie de Montréal, affiliated with Université de Montréal.

Published in the Journal of the American Medical Directors Association, the study looked at the relationship between functional independence and muscle mass and quality in 1219 healthy women aged 75 and older. It should be noted that these results are applicable to men's health as well. The analysis showed that women who maintained better muscle quality (the ratio of strength to muscle mass) also had better functional reserves, which help people maintain independence. Women with lower muscle quality had a three to six times higher risk of developing functional impairments (e.g., difficulty walking, getting up from a chair, or climbing stairs).

"These results contradict what has been believed for a long time about muscles and aging. Many seniors, whom we often perceive as frail and fragile, can surprise us by their muscle strength. Although inevitable, age-related [muscle loss](#) (a normal process called "sarcopenia") should no longer be seen as a sign of weakness," stated Mylène Aubertin-Leheudre, PhD.

She hopes that these findings will give [health care professionals](#) tools to better identify seniors at risk of [functional decline](#) and to design physical activity programs that would specifically target resistance and power and not simply a gain in muscle mass. Popeye should take heed!

This study consisted in analyzing the biometric data of 1219 women aged 75 and older. The researchers assessed [body composition](#), handgrip and knee extension strength. Physical functions were measured with the chair stand test and gait speed test (usual and fast). Participants also had to indicate whether they experienced difficulty performing functional tasks. Independently of muscle mass, participants with high muscle quality had low risks of functional impairment, whereas people with high muscle mass but low muscle quality had high risks of impairment.

**More information:** Barbat-Artigas S., Rolland Y., Vellas B., Aubertin-Leheudre M. Muscle Quantity Is Not Synonymous With Muscle Quality, *Journal of the American Medical Directors Association*, July 26, 2013.

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